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ABSTRACT

This paper, which is part of the work of the Stanford University Environment for Teaching Program, discusses problems that are repeatedly found in the literature on formative evaluation, with emphasis on the special difficulties of conducting formative evaluation in schools. It defines the requirements of effective formative evaluation as (1) a link between evaluation and decision making (provided by continuous assessment and feedback), (2) involvement of all who will be affected by decisions based on evaluation, (3) a theoretical framework to support the evaluation, and (4) close attention to the school's social and political setting. On the basis of this discussion the paper suggests a survey-feedback approach which provides objective information and a process involving all relevant constituencies in a dialogue with natural work groups in the school to define school problems and develop strategies for their solution. This formative evaluation strategy is aimed at institutionalizing probler solving in a school, and in this regard the paper examines the problems and prospects of the approach. (Author/RC)

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Occasional Paper No. 5

WATER AND THE DUCK'S BACK: THE USE OF FORMATIVE EVALUATION IN SCHOOLS

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Stanford, California

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Introductory Statement

The Center's mission is to improve teaching in American schools. Its work is carried out through three research and development programs--Teaching Effectiveness, the Environment for Teaching, and Teaching and Linguistic Pluralism--and a technical assistance program, the Stanford Urban/Rural Leadership Training Institute. A program of Exploratory and Related Studies includes smaller studies not included in the major programs. The ERIC Clearinghouse on Information Resources is also a part of the Center.

This paper, which is part of the work of the Environment for Teaching Program, discusses problems that are repeatedly found in the literature on formative evaluation, with emphasis on the special difficulties of conducting formative evaluation in schools. It defines the requirements of effective formative evaluation as (a) a link between evaluation and decision making (provided by continuous assessment and feedback), (b) involvement of all who will be affected by decisions based on evaluation, (c) a theoretical framework to support the evaluation, and (d) close attention to the school's social and political setting. On the basis of this discussion the paper suggests a survey-feedback approach which provides objective information and a process involving all relevant constituencies in a dialogue with natural work groups in the school to define school problems and develop strategies for their solution. This formative evaluation strategy is aimed at institutionalizing problem solving in a school, and in this regard the paper examines the problems and prospects of the approach.

WATER AND THE DUCK'S BACK: THE USE OF FORMATIVE EVALUATION IN SCHOOLS

Terrence E. Deal and Kathleen M. Huguenin

Evaluation efforts in schools have had an effect equivalent to that made by water on the back of a duck. There are those who would attribute responsibility for this situation to the duck: "Schools have characteristics which make them resistant to evaluation efforts." And there are those who would attribute it to the water: "Today's educator may rely little on formal evaluation because its answers have seldom been answers to questions he is asking" (Stake, 1967).

This paper assigns the responsibility neither to the water nor to the duck but to the match between them. It asks the question: How can formative evaluation assist educators in improving schools? Our purpose is to suggest some general criteria for formative evaluation and a specific strategy for improving it. First, we shall define formative evaluation and focus on the limitations and problems that are recurrently described in the literature. Second, we shall consider the unique characteristics of school organizations that pose challenges to formative evaluation. Third, we shall suggest a survey-feedback process as a specific strategy for evaluating schools as organizations. Fourth, we shall discuss the potential of the survey-feedback approach for addressing the problems of formative evaluation.

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Formative Evaluation: What Is It?

In its broad sense, "evaluation is the process of ascertaining the decision areas of concern, selecting appropriate information, and collecting and analyzing information in order to report summary data useful to decision makers in selecting among alternatives" (Alkin, 1969).

Within this broad area of evaluation several finer distinctions can be made. The first crucial distinction is between evaluation that is conducted while an activity or program is going on and evaluation that is conducted after the fact. The former type of evaluation is formative, the later summative (sometimes called post hoc or pass-fail). According to Scriven, "formative evaluation produces information that is fed back during the development (of a program) to help improve it. It serves the needs of the developers" (in Weiss, 1972). This paper focuses on formative rather than summative evaluation.

Another important distinction is between the goals and roles of evaluation. Recognizing the misunderstanding and confusion between the two, Scriven (1967) makes the following dichotomy: goals are the methodological activities that are used in the evaluation process, similar whether they are applied to the evaluation of coffee machines or teaching machines; the roles of evaluation focus on the context in which the evaluation process is used, or the function it plays in a particular situation. Implicit in the role of evaluation is a direct link to the policy and decision-making process. Objections at the role level often means the goal questions do not get answered. Thus this paper is designed to focus on an explicit interrelationship between roles and goals.

A third distinction is between evaluation research and policy analysis. Rossi (1972) defines research as the use of scientific methods to describe phenomena and their relationships, while policy analysis synthesizes this information and develops guides for decision making. Ideally, these two aspects of evaluation would not be mutually exclusive but rather complementary. "The circumstances under which to conduct policy analysis would be when the effectiveness of alternative social policies are known through evaluation research" (Rossi, 1972).

Evaluation incorporates a broad range of activities. Ideally, evaluation research provides either formative or summative input for decision makers. It encourages a consideration of the contributions of both the goal of an evaluation and the roles that it can play. And it provides a means through which research can contribute to policy analysis. Why, then, are so many evaluation studies shelved on far corners to collect dust? Why does the cycle cease at the analytical level rather than lead to recommendations for action? And why the general distrust and misgivings about evaluation?

Recurrent Problems

Our main concern is why formative evaluation, in particular, has not provided a more positive contribution or an impetus for action in improving schools. We will begin by focusing on its limitations and the problems encountered in conducting it. These problems will be discussed under four general headings that describe the major requirements, or needs, of formative evaluation: (1) a linkage between evaluation and decision making, (2) involvement of those who will be affected by decisions based on evaluation, (3) the existence of a theoretical framework, and (4) attention to the social and political setting.

Need for continuous assessment and feedback into the decision-making process. This need arises from the following three problems. First, the linkage with the decision-making process is frequently absent. By definition, "an evaluation study should be a problem-solving enterprise with a clear-cut relationship to some decision-making function" (Suchman, 1970). This assertion is found throughout the evaluation literature. The primary criteria by which an evaluation's effectiveness can be measured are its usefulness and its potential to lead to change. Nevertheless, as Guba (1969) reiterates in his list of specific problems in this area, there has been repeated failure to link evaluation and the decision-making process.

Second, there has been a lack of emphasis on feedback. Formative evaluation involves more than a final judgment; it emphasizes an understanding of the ongoing process and a continual feedback of information. Rather than a "before" and "after," a "during, during, during" design is necessary. We maintain that an interactive process--stop, go back, revise or continue--is needed to make evaluation useful. Weiss (1972) proposes the following remedies, which are designed to increase the usefulness of evaluation feedback: it should be given (a) to the appropriate level of users, (b) in understandable, nontechnical language, (c) before decisions are made.

Third, evaluations are often one-shot and after-the-fact (Guba, 1969; Suchman, 1970; and Weiss, 1970). Furthermore, the decision that follows is often dichotomous: Do we or don't we continue this program? It is repeatedly suggested in the literature that there be stress on program improvement rather than simply a judgment of success or failure.

Given these limitations, formative evaluation rarely leads to action, and evaluation results are seldom used. There is no direct link between assessment and improvement. If improvement is the main goal of formative evaluation then making such a linkage is crucial.

Need to involve relevant groups. Two issues recur in the literature: the lack of involvement of the relevant individuals and groups in the organization or program being evaluated, and the concomitant reliance on experts from outside. Not only are representatives from the various levels of a program frequently excluded, but often even administrators do not take an active role in the evaluation process. Involvement of these relevant individuals and groups is frequently suggested as a way of minimizing friction between the evaluators and the staff of the program or organization being evaluated and as a potential way of increasing the implementation of actions suggested by the evaluative results. In addition, input from all relevant sources is often suggested to increase the validity of evaluation findings (Weiss, 1972). These possible advantages seldom become reality because the participants are usually marginally and passively involved in the evaluation.

Heavy reliance on externally trained personnel creates a gap between demand and supply, because adequately trained evaluation personnel are a rarity (Guba, 1969). It also reduces the legitimacy of the evaluation, since outsiders rarely generate a sense of legitimacy and trust. Hence, the involvement of practitioners in the evaluation process makes sense on two levels. If internal personnel are involved they should perceive evaluation as less threatening. Further, their involvement produces a larger volume of inside information such as the "backstage" realities of the program, the norms, the jargon, and the critical subterranean issues (Weiss, 1972).

Need to make the theoretical framework explicit. This need arises from four concerns expressed in the literature. First, evaluation must have an underlying conceptual framework. A particular study should be located in an overall theoretical perspective (Weiss, 1972). A conceptual framework, as opposed to the individual idiosyncrasies or the whims of the evaluator, should determine where the attention is focused, i.e., what information is obtained. It also influences the evaluation methodology--how information is obtained, and how it is summarized or processed. Finally, the conceptual framework has implications for the selection of an intervention strategy to correct areas identified by the evaluation as needing improvement. There must be a match between the conceptual framework and the evaluation problem. For example, where fundamental problems may exist in the organizational structure, evaluation based on a psychological model may not focus attention on the most salient aspects (Deal, 1974).

Second, there is a need to make the evaluator's underlying framework explicit. Rein (1973) points out that our social science perspectives determine how we view the world and how we organize knowledge concerning the variables we examine. An evaluation model is basically a set of assumptions about how a particular segment of the world works. Consequently, any evaluation study needs to state exactly what these assumptions are. Alkin (1969) charges that when an evaluator reports summary data to a decision maker, judgments are implicit, and it is therefore incumbent upon that evaluator to make explicit the value systems underlying these judgments.

Third, the formulation of goals has been overemphasized. Aside from the obvious problems encountered when attempting to operationalize and measure goals, too much emphasis on this level leads to a preoccupation with value judgments and intentions and moves away from an examination of what is actually happening in a particular setting (Scriven, 1967). To avoid being bogged down in the goal "swamp," a systems approach is often used.

The systems approach, suggested by Etzioni (Weiss, 1970) addresses a fourth theoretical problem--the limitation of reliance on a static, rather than a dynamic, framework. Basic to the systems approach is an image of organizations as dynamic interrelationships among various subsystems. This is congruent with Suchman's (1970) assertion that it is necessary for evaluators to view organizations as relationships rather than static entities. The systems view has implications for where evaluators focus attention. Programmatic effects cannot only be observed on participants, but on the entire system and the various subsystems. Implications can be derived for possible organizational resistance to changes which the evaluation ultimately suggests. Though logical or rational, these proposed changes may not be organizationally feasible or acceptable given a holistic view of organizational interrelationships.

Need to consider the social and political context. By definition, because evaluation is description and judgment, it is political. Cohen (1970) asserts that evaluation is necessarily political because it often contributes to changes in power relationships. It produces information that is potentially relevant to the decision makers who are responsible for allocating resources--money, position, or authority. In the past, evaluators have failed to anticipate the ramifications of suggested change strategies and resistance to them.

Considerable resistance originates in the social structure of the organization and environment in which the evaluation takes place. Within any such context there exist potential support and potential obstructions; both must be taken into account. These social realities have an effect on potential organizational resistance to change. Longwood and Simmel (1962) have noted that "no matter what purpose an organization is

created for, once it is established its purpose becomes to perpetuate itself." Social and political considerations can be useful in determining whether resistance will come from individuals within the organization, from the sociopolitical environment in which the organization is embedded, or from the organization itself.

Some Special Problems of Formative Evaluation in Schools

The four general problems of formative evaluation transfer as evaluation is conducted in educational settings. Additionally, schools have special features which add to or intensify these problems.

Education--teaching and learning--takes place in formal, complex organizations. It is therefore important that the systems framework underlying the evaluation be closely related to organization theory. Organizations can be considered systems with five main subsystems: environment, technology, formal structure, individual and small group norms and processes, and goals (Udy, 1965). Systems theory emphasizes that these subsystems are interrelated; hence, changes in any one subsystem have consequences for all the rest. Environmental changes, for example, affect the other organizational subsystems: goals, structure, technology, and small group processes.

Formative evaluation may focus on any particular organizational subsystem. But because these subsystems are so highly interrelated in schools, as in other organizations, feedback that suggests changes in only one subsystem may produce problems because the impact on the others was not assessed or because the other subsystems did not provide the proper support for the change. For example, an evaluation of a particular reading program (or technology) may reveal the need for a higher level of individualization. But changing the reading program may also require changes in the way teachers work together or in the way school-wide decisions are made. Similarly, an assessment of community needs may lead to changes in a school's educational goals. But these changes may also

affect structural features of the school such as evaluation processes, specialization, or coordination needs, and may increase the demands on individuals or change the processes that operate in small groups (Deal and Baldridge, 1974).

The aim of conducting formative evaluation is to improve schools. Since schools are complex organizations, sensitivity to the dynamic relationships among the five important subsystems is crucial if improvements are to be sustained. The conceptual foundation of formative evaluation should facilitate sensitivity by providing a way of understanding the organizational forces that support or constrain both evaluation and improvement.

In addition to the dynamic relationships of the main organizational subsystems, there are some special qualities of each subsystem in school organizations that affect the formative evaluation process. The most important implications of these qualities for evaluation stem from the relationship between schools and their environments and the nature of educational goals. In any formative evaluation the social and political context is an important consideration. Schools, however, are formally controlled by the communities in which they function and by the state legislature. Ultimately, what is taught in schools--as well as how it is taught and by whom--is determined by local school boards and the state. The social and political environment is overtly part of the school system. As a result, formative evaluation must pay special attention to the social configurations and political forces that operate in the local community or other levels of the environment. There must also be a recognition that these configurations and forces will vary in diversity, stability, and influence.

The goal subsystem in schools is also different from other organizations in which formative evaluation takes place. The goals of education are diffuse and multi-faceted. In a business organization the ultimate goal is profit, which is specific, unidimensional, and easy to measure. In comparison the goals of education are unclear and diverse, and measuring progress toward them is a feat that outdistances current measurement technology.

Attempts to make the goals of education clear and measurable or to narrow the range of what schools are expected to accomplish have encountered several difficulties. Making the goals specific often results in heated contests among various community or school factions. Limiting the range of goals collides with the expectations various individuals or groups hold for schools. For example, focusing on the instructional or socialization functions of education often runs afoul of other, more latent functions such as custody control, evaluation, certification, and selection (Spady, 1974).

The special qualities of educational goals have important implications for formative evaluation in schools. In fact, it is nearly impossible simply to begin formative evaluation with a statement of educational goals and then to measure the extent to which they have been realized. Rather, the formative evaluation process itself should provide the basis for reaching a consensus on goals or on the problems that confront the system. Following this initial stage, the criteria for measuring goals and other indicators of school performance may then become the focus of subsequent evaluation.

Although the special qualities of educational environments and goals have the most important implications for formative evaluation in schools, the other organizational subsystems also have qualities that affect evaluation activities. The unique character of educational technology, group processes and norms, and the formal structure of schools contribute additional problems that make formative evaluation difficult.

An organization's technology is a series of integrated activities, procedures, or processes conducted to accomplish intended goals. Underlying a technology is a set of beliefs about the linkage between the activities or procedures and the intended outcomes. In schools, the main technology (instruction) is fragmented, and the link between instructional activities and learning outcomes is relatively weak. Curricula, instructional packages, and teaching strategies are examples of educational technologies. But for these examples the knowledge or beliefs to support a specific cause-effect linkage between the

technology and the outcome do not exist (Dreeben, 1970). The linkage between teaching strategies and learning outcomes is not understood. For this reason, evaluation that focuses solely on educational outcomes does not provide a direction for improvement. Reporting achievement scores to teachers or schools does not, by itself, provide a direction for change. Student performance on such tests is only an indicator and unless accompanied by information on other aspects of instruction or the organization of the school is relatively useless for formative purposes.

As in all organizations, individual and small group activities are an essential subsystem. Around these activities informal relationships and norms arise which influence the formal structure of the organization and the way work is performed. Such informal relationships and norms are often quite powerful in schools, particularly at the teacher level, and are buttressed by teachers associations, which emphasize the teacher as an autonomous professional. These two factors combine to produce the bureaucratic-professional conflict often found in organizations. In the absence of well-developed formal controls or sanctions, informal norms and processes are particularly potent. They are often powerful barriers to change and are resistant to evaluation efforts. They must, however, be part of formative evaluation if it is to accomplish its main goal--improvement of the system.

Finally, the formal structural features of schools are unique. Within school districts, for example, the various organizational levels--district, school, and classroom--operate independently of one another with little formal coordination or control, particularly in the area of instruction (Deal, Meyer, and Scott, 1974; Meyer, Scott, Intili, and Main, 1974). Within levels also, participants operate independently. There is little formal work-related interaction within schools either among teachers or between teachers and specialists (Cohen and Bredo, 1974). There is little interaction between principals or teachers of different schools within the same district (Meyer, Scott, Intili, and Main, 1974). Evaluation of teaching or instruction is virtually non-existent (Dornbusch and Scott, 1975). Formal evaluation of teachers

or principals is not conducted frequently. Neither, in most schools, do teachers evaluate each other's classroom performance. Structurally, schools are loosely coupled collectives rather than well-knit formal organizations. This arrangement minimizes the costs of coordination, such as time and conflict (Deal, 1975). Formative evaluation in schools must recognize these existing structural patterns and the rational basis for their maintenance. At the same time, these patterns of social organization must be a prime focus of formative evaluation.

To date, formative evaluation in education has not been directed at all the important organizational subsystems in schools. Nor has it recognized the special characteristics of these various subsystems and their dynamic interrelationships. Few evaluators have focused on the organizational structure of schools; few have focused on environmental configurations and pressures; few have emphasized instructional techniques or procedures or the linkage between existing teaching strategies and educational outcomes; few have focused significant attention on individual and small group processes and norms. While most educational evaluations have begun with educational goals and measured the extent that they have been realized, insufficient attention has been paid to the peculiar nature of educational goals, which makes such an emphasis problematic.

In sum, attempts at formative evaluation in education have not focused on the five important organizational subsystems and their interrelationships. Instead, the emphasis has been on instructional evaluation or the measurement of educational outcomes even though this approach, given the peculiar nature of school organizations, is usually less than effective. This emphasis has distorted the reality of highly complex social organizations. It has not produced the feedback that is needed if schools are to develop coherent, effective educational programs and design social organizations that provide suitable support. The narrow focus has contributed to patterns of school organization that are insufficient to cope with both complex educational environments and sophisticated instruction (Deal, 1975).

As formative evaluation is applied in schools it must take into account the unique nature of the educational enterprise. In addition, this application must recognize general problems in the field of formative evaluation. It must therefore: (1) be related to the decision-making process, (2) involve all participants in the evaluation process, (3) make explicit a dynamic, systems-oriented theoretical framework, (4) consider the social and political realities of the school's environment, and (5) emphasize the special characteristics of school organizations and their important relationships. Formative evaluation in schools cannot merely address instruction; it must consider the organization if schools are to identify and make necessary changes and provide for their support.

Survey Feedback as a Formative Evaluation Technique

The Environment for Teaching Program at SCRDT has developed an alternative strategy designed to overcome the limitations of formative evaluation in school organizations--a survey-feedback approach (Deal, Duckworth, and Robbins, 1975).

We begin the process with a survey which gathers systematic and comparable information from the participants--administrators, teachers, students, parents, and members of the community. This survey seeks information in such areas as educational views and preferences; the present instructional program; the relationship between the school and the community; the work relationships among teachers and between teachers and the administration; student attitudes, aspirations and preferences; the current decision-making and problem-solving processes; and the satisfaction of all participants, both overall and with respect to specific issues. Since a wide variety of views about many issues is obtained (at various levels within the system, and from various roles and from people outside the system), the survey produces a solid body of information both about the current state of affairs and about desirable directions for change. The survey information, together with information on student achievement, demographic data, and other existing information,

provides a base for evaluating the school that includes the perceptions of all participants as well as facts.

The second step in our strategy is to introduce a systems view of the dynamic relationships between a school and its community; between the instructional program and teachers, students, and the administration; and among the various roles that are required to make an educational program or school run. The distinctive characteristic of this perspective is its emphasis on organizational attributes, rather than individual characteristics, as the source of problems and of resistance to proposed changes.

The organizational view of the process of change is introduced to participants of a school or school district through a planned workshop. The workshop uses lecture, discussion, participative exercises, and materials to instruct school personnel in the organizational approach to problem solving and change. It focuses on general concepts and theory. It introduces participants to the five organizational subsystems and their relationships to one another. It also introduces participants to specific skills such as brainstorming, leading discussions, solving problems, interpreting survey data, making inferences from data, and developing criteria for selecting change strategies. These perspectives, skills, and techniques enable the participants to explore and eventually use the information provided by the survey to evaluate the existing situation, to pinpoint trouble spots, to develop directions for change, and to anticipate the support required for changes, as well as to predict any likely resistance. As an illustration, we might find that community educational preferences were not incorporated in the existing instructional program. This analysis might lead to suggestions for instructional changes. But the instructional changes would, if necessary, be accompanied by changes in the structure of the school or in the individual or small group skills needed to support the new instructional approach. At the same time, the analysis might predict that

certain segments of the community or a group of teachers within the school would oppose the changes. Strategies would then be developed to ensure that these views were heard and incorporated in the changes ultimately made.

The third step in our survey-feedback strategy is to emphasize participation in the process of evaluating the school and determining directions for improvement. All those who will be potentially involved in or affected by changes are involved in the process. Thus, the views of all will be heard, and the legitimacy of the evaluation as well as the level of commitment to the proposed change will be increased.

The dilemma of full participation is to involve everyone with relevant interests without creating a chaotic, unproductive squabble among them. We circumvent this problem by having two kinds of groups which will help conduct the survey, feed back the results, and discuss action strategies. A policy group is formed from representatives of all the constituencies involved: e.g. district administrators, the principal, teachers, parents, and students. Peer groups are also formed and are composed of individuals with common roles or interests in the school, e.g. the members of individual departments or grade levels. Groups of parents or community representatives can also be formed into a "peer" group, as can students. The peer groups meet to discuss the survey findings most relevant to themselves, and to feed back the results of their discussions to the policy group. The policy group thus has some idea of the desires of different interest groups in the school and the community as well as having access to the overall results of the study. This group may then consider alternative policies which could be instituted, and suggest strategies to the peer groups for their review. In this way a dialogue is begun between the peer and policy groups, between the special and the general interests. The dialogue will help gather inputs for problem solving as well as generate commitment to the ongoing process. In this way it will institutionalize problem solving in the system. And the evaluation activities will be linked to the existing decision-making apparatus.

The combination of objective information, an organizational perspective, and the participation process make survey feedback a unique approach to formative evaluation. Activities similar to those we propose are now used by schools or school districts: needs assessments, organizational climate surveys, organizational development programs, instructional assessments, and community involvement programs. Survey feedback is unique because it provides a planned sequence for relating these otherwise diverse activities in a systematic way.

How It Works

Three groups are involved in the survey-feedback process. We have mentioned the peer groups, which are natural work groups in the school, and the policy group, which is composed of representatives from all relevant constituencies. The third group is the advisory team. This group is analogous to the outside evaluator or consultant, and in our case includes representatives from the staff of the Environment for Teaching Program at SCRDT.

The policy group, the peer groups, and the advisory team form a temporary problem-solving structure. Each group has specific responsibilities as the survey information is reported and used.

The role of the policy group

1. Reviews questionnaires and determines field procedures.
2. Provides legitimacy for the study among various constituencies.
3. Participates in problem-solving workshops.
4. Uses survey results and input from peer groups to define school-wide problems.
5. Develops school-wide change strategies and oversees their implementation.
6. Takes an active role in evaluating the results of change strategies.

The role of the peer groups

1. Discuss survey information that pertains specifically to the work group.
2. Participate in problem-solving workshops.
3. Define the problems of the work group and develop tentative strategies for solving them.
4. Discuss the school-wide problems and solutions identified by the policy group.
5. React to proposed school-wide changes.
6. Implement both specific peer group and school-wide solutions.

The role of the advisory team

1. Provides criteria for selecting the policy group.
2. Provides survey instruments and works closely with the policy group in developing field procedures.
3. Supervises the collection of information.
4. Analyzes information and highlights possible problem areas.
5. Conducts problem-solving workshops to provide a common framework for discussing information, defining problems, and proposing solutions. Trains discussion leaders for each peer group.
6. Advises on process and suggests alternative formulations as problems are defined and solutions are proposed.
7. Assists in determining the effectiveness of change strategies.

The survey-feedback process in a school unfolds in the following sequence:

Step 1. Orientation

Advisory team introduces survey feedback to faculty, administration, and other groups; discusses the formation and composition of the policy group (the desired roles); and suggests procedures for selection.

Step 2. First survey design meeting

Policy group meets with advisory team to (a) identify relevant target areas, (b) identify groups to be surveyed, (c) discuss and assist with informal information gathering.

Step 3. Second survey design meeting.

Design procedures for gathering information. Advisory team meets with policy group to (a) review instruments and (b) establish procedures for collecting data.

Step 4. Data collection

School staff, students, district personnel, and parents complete survey.

Step 5. Data analysis and preliminary diagnosis

Advisory team analyzes data, defines problem areas, assesses "match" among preferences, instructional program, school organization, and environment.

Step 6. Problem-solving workshop

Advisory team meets with policy group and peer groups to (a) introduce organizational approach to problem solving and (b) train discussion leaders for feedback sessions.

Step 7. Feedback to peer groups

Advisory team meets with peer group leaders to feed back relevant results concerning their groups.

Step 8. Feedback to policy groups

Each peer group leader reports his/her group's results from survey and strategy suggestions. Advisory team presents overall results and findings. Entire group discusses organizational strategies, proposals for changes, etc.

Step 9. Feedback to peer groups

Peer group leaders again feed back overall findings and suggestions from policy group meeting, especially as it concerns implications for their particular group, and discuss organizational strategies.

Step 10. Strategy Session

Policy group and advisory team meet to discuss and confirm actual plan to implement strategies.

Step 11. Evaluation of results

After a specified time, parts of the survey are readministered.

Intended Effects

In essence, the survey-feedback process involves a comprehensive organizational analysis of a school. It gathers information from the five important organizational subsystems and uses the information to evaluate the existing situation and to provide a basis for making improvements. From the very beginning, the school's participants are heavily involved. The main goal of the process is to provide the participants with information, problem-solving skills, and a sequence of activities that will enable them to improve their existing situation. At the same time the process emphasizes the importance of anticipating resistance to changes and providing the support that is necessary to maintain changes over time. Like all formative evaluation, survey feedback is a diagnostic technique. Unlike other formative evaluation, however, it avoids some recurrent problems. Let us look more closely at how survey feedback addresses these previously identified problems.

The Potential of Survey Feedback as a Formative Evaluation Strategy

Thus far we have described the problems and needs discovered from an examination of the literature on formative evaluation; the unique problems entailed in evaluating schools; and a specific formative evaluation technique, survey feedback. Keeping in mind the special problems of school organizations, we shall now use the four needs of formative evaluation as criteria for assessing the value of survey feedback.

Need for continuous assessment and feedback to decision makers. This is the basic premise upon which the survey-feedback approach is based. The feedback sessions lead directly to strategy and implementation sessions. Strategies are then assessed in terms of their ability to solve the identified problems. The cycle is thus complete. Each aspect of the process is given equal importance. Relevance to the decision-making process is not left to chance or good intentions, it is

built in. Ideally, formative evaluation is a continuing process. In survey feedback, the last step of the first cycle automatically becomes the first step of the next...ad infinitum.

This concern for continuity is especially crucial in such ongoing programs as schooling. In the survey-feedback approach the institutionalization of formative evaluation as a continuous data gathering and feedback system is not simply an ideal--it is expected.

Need to involve relevant groups. Taylor and Maguire have pointed to five groups (and we would add a sixth, administrators) having important opinions about education: spokesmen for society at large, subject matter experts, teachers, parents, and the students themselves. Members of these groups are educational judges who should be heard. Superficial polls, letters to the editors, and other incidental activities are insufficient to obtain these judgments. An evaluation of a school program should systematically take into account its merits and faults as perceived by well-identified groups. Thus, judgment data and description data are both essential to the evaluation of educational programs (Stake, 1967).

Judgments from all these groups are integral to the survey-feedback approach. The usual reliance on biased information, hearsay, and rumor are replaced by systematic information solicited through a participative process. Not only should the quality of the evaluation product be enhanced as a consequence, but the commitment to any resultant change strategies should be increased.

The school's unique organizational characteristics--the importance of its loosely coupled formal structure (Meyer, 1975) and the dependence on the environment--can all be taken into account in the survey-feedback process through the mechanisms provided for input by the different kinds of groups and by including these various interests integrally in the process itself.

Another problem in formative evaluation addressed by the survey-feedback approach is the advantage of being able to conduct the evaluation internally. After a school has completed the survey-feedback process initially, it can be continued as an ongoing evaluation technique by school personnel, thereby eliminating further dependence on external resources.

Need to make the theoretical framework explicit. Not only does a dynamic organizational theory underlie the survey-feedback process; it is explicitly transmitted both in the orientation session and in the organizational problem-solving workshop. Participants therefore do not have to guess at the assumptions and purposes of the evaluation; the underlying framework is systematically shared with them. Like Lawrence and Lorsch's (1969) contingency model of organizations, our approach overtly seeks a "fit" among the instructional program, the structure, and the environment of the school organization. This congruence among the three levels is seen as instrumental in leading to the effectiveness of the organization. This framework is also consistent with Etzioni's dynamic systems model. His approach emphasizes the effectiveness of such organizational functions as "recruiting resources, maintaining the structure, and achieving integration into the environment" (in Weiss, 1970) rather than overall goals.

The framework underlying the survey-feedback approach considers the important organizational subsystems and their interrelations. Etzioni's functions of an organization overlap with Lawrence and Lorsch's and Udy's subsystems. A dynamic systems approach provides the key to evaluating the school as a total organization. It also minimizes the importance of setting the goals at the outset. This is especially crucial in a context where the goals are ambiguous, ill-defined, and contested.

Need to consider the social and political context. The survey-feedback approach addresses this concern on two levels. First, the process provides structural mechanisms for soliciting input from the environment and for generating output to it. Second, during strategy development and implementation, supportive and constraining forces of the social and political context are considered. Explorations can be made as to what is politically and socially feasible and cost-effective.

As we have pointed out previously, education not only occurs within such a social and political context but is dependent upon it for its very existence. There is no question whether to consider this context in evaluation; its inclusion is essential to survival. The survey-feedback approach recognizes this imperative and systematically includes the environment in the formative evaluation process.

Problems and Prospects

Lest the survey-feedback process be seized and embraced as an educational cure-all, we hasten to emphasize that it is not. As with any evaluation strategy operating in the real world of schools, there are potential problems. These exist in the process itself, its underlying assumptions, its applicability to a particular setting, and costs.

Within the survey-feedback process, there are three possible problem areas: securing real representativeness in the policy group, fostering an adequate dialogue between the policy and peer groups, and cultivating the organizational perspectives and special skills underlying the process. The last of these is most problematic. Given the individualistic or psychological view predominant among school administrators and teachers (Deal, 1974), it may prove difficult to encourage participants to view their world "organizationally." There are also specific skills in translating survey results into change strategies or improvement plans, but apart from the obvious discussion, problem solving, and group process skills, the linkage between assessment and solution may not be readily apparent to participants. The problem-solving process requires a familiarity with cause-effect relationships and knowledge of how to use systematic information to define problems and develop solutions. Bridging the gap between an academic approach and a real situation is difficult under any conditions.

Even assuming that the process unfolds according to the ideal, other problems may interfere. The first is in the area of educational goals. Most existing evaluation approaches begin by soliciting the organization's goals as evaluation criteria. The survey-feedback technique, on the other hand, assumes two levels of goals. The first level is process

goals and emphasizes developing a consensus on problems and change strategies which then become goals or evaluation criteria. Hence, at the first level, the "goal" of the technique is goal consensus. This emphasis, because of its ambiguity, may be difficult for those in education who are accustomed to beginning an evaluation with a statement of goals, then collecting information to measure their attainment. The second level of goals broadens the range of typical educational evaluations and specifies that the ultimate goal of schools is overall organizational effectiveness, including participant satisfaction and community support as well as the realization of student learning outcomes. This second level of goals is related to the organizational perspective underlying the survey-feedback process. This, once again, may be unfamiliar to participants. The organizational perspective assumes that organizational effectiveness is attained by a "fit" or "equilibrium" among the various organizational subsystems. This theory is essentially a contingency view of organizations and assumes that effective organizations are those that have designed structural features to fit their environment, program, and informal processes.

A second problem could exist because this underlying theory may be inadequate or may not lend itself to a particular school situation. Further, even if the theory adequately captures or orders reality in a given context, a valid measurement of the various concepts in the survey may be outside the grasp of our instruments.

A third potential problem may arise in the implementation stage. As with most evaluation systems, the survey-feedback process assumes a logical, rational orientation on the part of the participants. It assumes that all alternatives, preferences, and consequences are fully known and that participants will choose rationally among them. What may be closer to actuality is that all alternatives, preferences, and consequences are not fully known. Even if known, the participants may not choose rationally. And finally, a logically chosen strategy may be undermined by unanticipated political and social realities of the situation. Despite these constraints, however, survey feedback can be useful as a way of increasing the "known" part of the equation and anticipating the social and political ramifications.

A fourth problem is that the survey-feedback process is expensive (Derr, 1974). Retaining the outside advisory team to administer the survey, conduct workshops, and participate as a full partner in the process costs more than many schools or school districts are presently willing to invest in formative evaluation. Even if a school district is willing to commit the financial resources, obtaining qualified personnel with backgrounds in survey research, organization theory, and the skills needed to facilitate the problem-solving process may prove difficult.

The time required of teachers, administrators, parents, and community members is also substantial. Administering the survey, completing the survey, participating in workshops, solving problems in peer groups, and serving on the policy group require that participants spend more time than usual in evaluation and in planning activities. We estimate that the survey-feedback process will require at least eight weeks to complete. If this expenditure of time is viewed as taking too much time away from the day-to-day operation of the program, schools will be reluctant to participate.

Moreover, the process is bound to produce more conflict than would be the case in "business as usual," where many important conflicts are smoothed over or avoided. The survey-feedback process, by making latent conflicts explicit, may initially produce power struggles, infighting, and interpersonal stress. When this is added to the conflicts that will surface as new patterns of social organization are created, the process may appear too expensive. Buffering, as a means of responding to complex environments or instructional complexities, is cheap in terms of time and conflict (Deal, 1975), particularly when many of the costs of buffering, such as reduced organizational effectiveness, are as difficult to assess as they are in schools. Only if the costs of survey feedback are competitive with the costs of just enduring will schools be likely to undertake it. Even though survey feedback may, in the long run, be more effective than most formative evaluation, its short-term costs appear high. Although schools presently spend money and time for the separate activities included in the survey-feedback process despite the costs, these various activities are rarely related in a systematic, global process.

Although it is not a panacea, the survey-feedback process addresses some very fundamental concerns repeatedly found in the area of formative evaluation. It takes into account the special characteristics of schools. It directly bridges the gap between diagnosis and action. It ties together the presently discrete areas of organizational development, formative evaluation, and educational research. Perhaps, owing to the survey-feedback approach and others like it, it will someday be said that formative evaluation is effective in fostering educational improvement, and is not like water running off a duck's back.

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